

WHAT IS CLAIMED IS:

1. An interlayer having sound-damping properties that is useful for preparing acoustic laminates, the interlayer comprising or consisting essentially of: (i) polyvinyl butyral (PVB) having a hydroxyl number in the range of from about 17 to about 23 and (ii) a single plasticizer in an amount in the range of from about 40 to about 50 parts per hundred (pph).
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2. The interlayer of Claim 1 wherein the PVB has a hydroxyl number in the range of from about 18 to about 21.
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3. The interlayer of Claim 2 wherein the PVB has a hydroxyl number in the range of from about 18 to about 19.5.
- 15 4. The interlayer of Claim 3 wherein the plasticizer is selected from plasticizers in the group consisting of: diesters of polyethylene glycol.
5. The interlayer of Claim 4 wherein the plasticizer is selected from plasticizers in the group consisting of: triethylene glycol di(2-ethylhexanoate) (3GO) , tetraethylene glycol di heptanoate (4G7), triethyleneglycol di(2-ethylbutyrate), and di-hexyl adipate.
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6. The interlayer of Claim 5 wherein the plasticizer is 3GO.
- 25 7. The interlayer of Claim 5 wherein the plasticizer is present in an amount of from about 44 pph to about 47 pph.
8. A glass laminate having sound-damping properties comprising or consisting essentially of: a homogeneous interlayer of polyvinyl butyral positioned between two sheets of glass, wherein the PVB has a hydroxyl number in the range of from about 17 to about 23 and comprises a single plasticizer in an amount of from about 40 to about 50 pph parts.
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9. The glass laminate of Claim 8 wherein the PVB has a hydroxyl number in the range of from about 18 to about 21.
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10. The glass laminate of Claim 9 wherein the PVB has a hydroxyl number in the range of from about 18 to about 19.5.

5 11. The glass laminate of Claim 8 wherein the plasticizer is selected from plasticizers in the group consisting of: diesters of polyethylene glycol.

10 12. The glass laminate of Claim 11 wherein the plasticizer is selected from plasticizers in the group consisting of: triethylene glycol di(2-ethylhexanoate) (3GO) , tetraethylene glycol di heptanoate (4G7), triethyleneglycol di(2-ethylbutyrate),and di-hexyl adipate.

13. The glass laminate of Claim 12 wherein the plasticizer is 3GO.

15 14. The glass laminate of Claim 12 wherein the plasticizer is present in an amount of from about 44 pph to about 47 pph.

20 15. An article comprising a glass laminate having sound-damping properties wherein the laminate comprises or consists essentially of a homogeneous interlayer of polyvinyl butyral positioned between two sheets of glass, wherein the PVB has a hydroxyl number in the range of from about 17 to about 23 and comprises a single plasticizer in an amount of from about 40 to about 50 pph parts.

25 16. The article of Claim 15 wherein the PVB has a hydroxyl number in the range of from about 18 to about 21.

30 17. The article of Claim 16 wherein the PVB has a hydroxyl number in the range of from about 18 to about 19.5.

18. The article of Claim 17 wherein the plasticizer is selected from plasticizers in the group consisting of diesters of polyethylene glycol.

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19. The article of Claim 18 wherein the plasticizer is selected from plasticizers in the group consisting of: triethylene glycol di(2-ethylhexanoate) (3GO), tetraethylene glycol di heptanoate (4G7), triethyleneglycol di(2-ethylbutyrate), and di-hexyl adipate.
- 5 20. The article of Claim 19 wherein the plasticizer is 3GO.
21. The article of Claim 19 wherein the plasticizer is present in an amount of from about 44 pph to about 47 pph.
- 10 22. The article of Claim 18 wherein the article is a motorized vehicle.
23. The vehicle of Claim 22 wherein the vehicle is selected from the group consisting of: an automobile; a train; and a plane.
- 15 24. The article of Claim 18 wherein the article is a building.
25. The article of Claim 24 wherein the glass laminate is a window glazing unit.
- 20 26. The article of Claim 24 wherein the glass laminate is: a partition, a wall, a floor, or a ceiling.